

# C.U.SHAH UNIVERSITY

## Summer Examination 2019

**Subject Name:** Pharmaceutical Engineering - Theory

**Subject Code:** BP304T

**Branch:** B.Pharm

**Semester:** 3

**Date :** 18/03/2019

**Time :** 02:30 To 05:30

**Marks :** 75

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

**Q-1 Define following: (20)**

- a) Heat exchangers
- b) Black body
- c) Gray body
- d) Reynolds number
- e) Colloidal mill
- f) Duhring's Rule
- g) Raoult's Law
- h) Equilibrium Moisture Content (EMC).
- i) Cyclone separator
- j) Distillation

**Attempt the following questions:**

**Q-2 Attempt any two of following : (20)**

- A** Compare and contrast Orifice meter and Ventury meter **10**
- B** Draw the drying rate curve and explain the different stages in drying of solids **10**
- C** Define centrifugation. Explain in brief centrifugal effect. Enumerate applications of centrifugation in pharmacy **10**

**Q-3 Attempt any Seven of following : (35)**

- A** Discuss properties of material which affect size reduction process **5**
- B** Define: Size separation. Give objectives & methods involved in size Separation **5**
- C** Classify mixers for liquids. Describe Propeller mixer **5**
- D** Why do we use steam as heating media in Pharmaceutical industry? **5**
- E** Describe Fourier's law. Explain steady state condition **5**
- F** Explain factors affecting filtration **5**
- G** Explain factors affecting rate of evaporation **5**
- H** Write a brief note on distillation columns **5**
- I** Write a note on prevention of corrosion in a pharmaceutical plant **5**

